



CLAIMS

What we claim is:

- 1. A method of dewrinkling and providing rewrinkling resistance to a fabric comprising the steps of
 - a) providing a target fabric;
- b) spray-contacting said target fabric of step a" with a composition comprising water and a fiber lubricant/plasticizer;

wherein said fiber lubricant/plasticizer is selected from the group consisting of high density polyolefin waxes, at least one compound that conforms with the following Formula (A)

at least one compound that conforms with the following Formula (A)

(A)

H

$$[H - C - [-O-C(=O)-] - [C_xH_y-O-] - [CH_2CH_2O-]_{a1} - [CH_2CH_2(CH_3)O-]_{b1} - [II]_{s1}]_d$$

[H - C - [-O-C(=O)-]- [
$$C_xH_y$$
-O-]-[CH_2CH_2O -]_{a2}-[$CH_2CH_2(CH_3)O$ -]_{b2} - [II]_{s2}]_e

[H - C - [-O-C(=O)-]- [
$$\phi_x^{\prime}H_y^{\prime}$$
-O-]-[CH₂CH₂O-]_{a3}-[CH₂CH₂(CH₃)O-]_{b3} - [II]_{s3}]_{f₁}

$$\left[\left[\text{H - C - [-O-C(=O)-]-/} \left(\text{C}_{x} \text{H}_{y_{j}} \text{-O-]-[CH}_{2} \text{CH}_{2} \text{O-]}_{a4} \text{-[CH}_{2} \text{CH}_{2} \text{(CH}_{3}) \text{O-]}_{b4} \text{-[II]}_{s4} \right]_{g} \right]$$

wherein d = f = h = 1; e = 0 or 1; g = 0 or 1; $2 \le x \le 20$; $(2x-4) \le y \le 2x$; and

$$\sum a_i > = 8$$

$$\sum a_{i}(44) = 8$$
 and $\sum a_{i}(44) + \sum b_{i}(56) >= 0.$

wherein structure [II] is H, CH₃, or

wherein $R_2 = C_pH_q$ such that $1 \le p \le 20$, $2p \ne 3 \le q \le 2p+1$, and $s_i = 0$ or 1;

at least one compound that conforms with the following Formula (B)

[I] -
$$[CH_2CH_2O-]_{\widehat{ai}}$$
- $[CH_2CH_2(CH_3)O-]_{\widehat{bi}}$ [II]_{si}

wherein structure [I] is H, $\sqrt{H_3O}$, or $R_1(O)_c$;

wherein $R_1 = C_n H_m$, and $2 \nleq n \le 20$, $(2n-4) \le m \le 2n+1$, $1 \le c \le 5$, and

$$\Sigma$$
 $a_i \ge 8$, and Σ $a_i (44)$ Σ $b_i (56) \ge 0.6$

wherein and Structure [II] is H, CH₃, or

wherein $R_2 = C_p H_q$ such that $1 \le p \le 20$, $2p - 3 \le q \le 2p + 1$, and $s_i = 0$ or 1;

wherein when \sharp tructure I is not H or CH₃, or Structure II is not H or CH₃, then $1 \le i \le c$

$$\Sigma a_i \ge 8$$
 and $\sum a_i (44)$ ≥ 0.6 ; wherein when Structure I is H or $\Sigma a_i (44) + \Sigma b_i (56)$

CH₃O and Structure II is H, then i = 1 and $a(44) + b(56) \ge 8000$ and

$$\frac{a(44)}{a(44)+b(56)} \ge 0.6;$$

and any mixtures thereof.

- 2. The method of Claim 2 wherein said fiber lubricant/plasticizer exhibits a HLB of greater than or equal to 8.0.
- 3. The method of Claim 1 wherein said fiber lubricant/plasticizer is a high density polyolefin wax.
- 4. The method of Claim 2 wherein said fiber lubricant/plasticizer is selected from the group consisting of alkoxylated fatty acid esters, alkoxylated fatty acid esters, polyoxyalkylene waxes, emulsified high density polyethylenes, alkoxylated alcohols, blends of any such compounds with salts, and any mixtures thereof
- 5. The method of Claim 4 wherein said fiber lubricant/plasticizer is ethoxylated easter oil.
- 6. A fabric treated in accordance with the method of Claim 1.
- 7. A fabric treated in accordance with the method of Claim 2.
- 8. A fabric treated in accordance with the method of Claim 3.
- 9. A fabric treated in accordance with the method of Claim 4.

- 10. A fabric treated in accordance with the method of Claim 5.
- 11. A method of dewrinkling and providing rewrinkling resistance to a fabric comprising the steps of
 - a) providing a target fabric;

wherein structure [II] is H, CH₃, or

b) spray-contacting said target fabric of step "a" with a non-film forming composition comprising water and a fiber lubricant/plasticizer; wherein said fiber lubricant/plasticizer is selected from the group consisting of high density polyolefin waxes, at least one compound that conforms with the following Formula (A)

 $\begin{array}{c} \text{H} \\ \text{H} \\ \text{C} - [\text{-O-C(=O)-]-} [\text{C}_x \text{H}_y \text{-O-]-} [\text{CH}_2 \text{CH}_2 \text{O-}]_{a1} \text{-} [\text{CH}_2 \text{CH}_2 (\text{CH}_3) \text{O-}]_{b1} \text{-} [\text{II}]_{s1}]_{d} \\ \text{H} - \text{C} - [\text{-O-C(=O)-]-} [\text{C}_x \text{H}_y \text{-O-]-} [\text{CH}_2 \text{CH}_2 \text{O-}]_{a2} \text{-} [\text{CH}_2 \text{CH}_2 (\text{CH}_3) \text{O-}]_{b2} \text{-} [\text{II}]_{s2}]_{e} \\ \text{H} - \text{C} - [\text{-O-C(=O)-]-} [\text{C}_x \text{H}_y \text{-O-]-} [\text{CH}_2 \text{CH}_2 \text{O-}]_{a3} \text{-} [\text{CH}_2 \text{CH}_2 (\text{CH}_3) \text{O-}]_{b3} \text{-} [\text{II}]_{s3}]_{f} \\ \text{H} - \text{C} - [\text{-O-C(=O)-]-} [\text{C}_x \text{H}_y \text{-O-]-} [\text{CH}_2 \text{CH}_2 \text{O-}]_{a4} \text{-} [\text{CH}_2 \text{CH}_2 (\text{CH}_3) \text{O-}]_{b4} \text{-} [\text{II}]_{s4}]_{g} \\ \text{H} - \text{C} - [\text{-O-C(=O)-]-} [\text{C}_x \text{H}_y \text{-O-]-} [\text{CH}_2 \text{CH}_2 \text{O-}]_{a5} \text{-} [\text{CH}_2 \text{CH}_2 (\text{CH}_3) \text{O-}]_{b5} \text{-} [\text{II}]_{s5}]_{h} \\ \text{H} \\ \text{wherein d} = \text{f} = \text{h} = \text{1; e} = \text{0 or 1; g} = \text{0 or 1; 2} \leq \text{x} \leq \text{20; (2x-4)} \leq \text{y} \leq \text{2x; and} \\ & \sum_{a_1} (44) \\ & \sum_{a_1} (44) + \sum_{b_1} (56) \end{array} > = 0.6; \end{array}$

20

- C - R₂





wherein
$$R_2 = C_p H_q$$
 such that $1 \le p \le 20$, $2p - 3 \le q \le 2p + 1$, and $s_i = 0$ or 1; at least one compound that conforms with the following Formula (B)

(B)

wherein structure [I] is H, CH_3O , or $R_1(O)_c$;

wherein $R_1 = C_n H_m$, and $2 \le n \le 20$, $(2n-4) \le m \le 2n+1$, $1 \le c \le 5$, and

$$\Sigma a_i \ge 8$$
, and $\Sigma a_i (44)$ ≥ 0.6 $\Sigma a_i (44) + \Sigma b_i (56)$

wherein and Structure [/II] is H, CH₃, or

wherein $R_2 = C_p H_q$ such that $1 \le p \le 20$, $2p - 3 \le q \le 2p + 1$, and $s_i = 0$ or 1;

wherein when Structure I is not H or CH₃, or Structure II is not H or CH₃, then $1 \le i \le c$

$$\sum a_i \ge 8$$
 and

$$\frac{\sum a_i(44)}{\sum a_i(44) + \sum b_i(56)}$$
 ≥ 0.6 ; wherein when Structure I is H or

CH₃O and Structure II is H, then i = 1 and $a(44) + b(56) \ge 8000$ and

$$a(44) / a(44) + b(56) \ge 0.6;$$

and any mixtures thereof.

- 12. The method of Claim 11 wherein said fiber lubricant/plasticizer exhibits a HLB of greater than or equal to 8.0.
- 13. The method of Claim 11 wherein said fiber lubricant/plasticizer is a high density polyolefin wax.
- 14. The method of Claim 12 wherein said fiber subricant/plasticizer is selected from the group consisting of alkoxylated fatty acid esters, alkoxylated fatty acid esters, polyoxyalkylene waxes, emulsified high density polyethylenes, alkoxylated alcohols, blends of any such compounds with salts, and any mixtures thereof
- 15. The method of Claim 14 wherein said fiber lubricant/plasticizer is ethoxylated castor oil.
- 16. A fabric treated in accordance with the method of Claim 11.
- 17. A fabric treated in accordance with the method of Claim 12.
- 18. A fabric treated in accordance with the method of Claim 13.
- 19. A fabric treated in accordance with the method of Claim 14.
- 20. A fabric treated in accordance with the method of Claim 15.